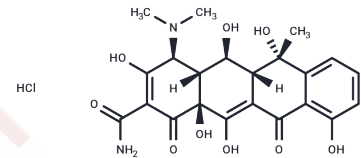


Oxytetracycline Hydrochloride

Chemical Properties

CAS No. :	2058-46-0
Formula:	C ₂₂ H ₂₅ ClN ₂ O ₉
Molecular Weight:	496.89
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Oxytetracycline Hydrochloride (Dalimycin) is a tetracycline derivative produced by <i>Streptomyces rimosus</i> with antimicrobial activity. It interferes with the binding of aminoacyl-tRNA to the mRNA-ribosome complex, resulting in preventing peptide elongation and inhibiting protein synthesis.
Targets(IC50)	Antiviral,Endogenous Metabolite,Antibacterial,Antibiotic,HSV
In vivo	The 10-day effect of oxytetracycline at therapeutic doses (82.8 mg/kg bw to 1 % bw/day) was species-specific. Oxytetracycline increases the enzymatic activity of CYP3A4 in <i>Ictalurus punctatus</i> , increases the protein expression of CYP3A4 in <i>Oreochromis niloticus</i> , and depletes hepatic CYP3A4 in the latter, and also increases the relative liver weight of <i>Morone chrysops</i> x <i>M. saxatilis</i> [1]. Oxytetracycline is limited to 100 µg/kg in muscle and breast milk, 200 µg/kg in eggs, 300 µg/kg in liver, and 600 µg/kg in kidney[3].

Solubility Information

Solubility	H ₂ O: 123.75 mg/mL (249.05 mM),Sonication is recommended. DMSO: 60 mg/mL (120.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (8.05 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0125 mL	10.0626 mL	20.1252 mL
5 mM	0.4025 mL	2.0125 mL	4.025 mL
10 mM	0.2013 mL	1.0063 mL	2.0125 mL
50 mM	0.0403 mL	0.2013 mL	0.4025 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Morales-Nin B, Grau A, Pérez-Mayol S, Pastor E, Palmer M. Oxytetracycline hydrochloride vital labelling revisited: the case of *Dicentrarchus labrax* and *Diplodus puntazzo*. *J Fish Biol.* 2011 Mar;78(3):762-82.

Pickens LB, et al. Oxytetracycline biosynthesis. *J Biol Chem.* 2010 Sep 3;285(36):27509-15.

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López-Jornet P, Camacho-Alonso F, Martínez-Canovas A, Sidrach-Cardona M. Topical 1% oxytetracycline hydrochloride versus placebo in oral mucosa biopsy. *Dermatol Surg.* 2012 Jul;38(7Pt 1):1054-8.

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